News release

11 October 2007

World becoming more humid

The world is becoming more humid under climate change and exacerbating global warming, research released today (11 October) reveals. Scientists from the Met Office Hadley Centre and the Climatic Research Unit at the University of East Anglia have found strong evidence of human influence on changes in global surface humidity.

In a paper published today in the scientific journal *Nature*, the scientists explore and identify the causes of changes in humidity over the last 30 years

Surface humidity is a measure of the amount of water vapour per volume of air. Water vapour is the most important natural greenhouse gas, and its concentration is expected to rise as the climate warms due to man-made climate change, which in turn will cause more global warming.

Increases in specific humidity have implications for extreme weather, affecting:

- the geographical distribution and maximum intensity of rainfall;
- the maximum intensity of tropical cyclones;
- heat stress;
- the biosphere;
- surface hydrology.

New surface humidity observational data were compared to Met Office Hadley Centre climate model output, taking into account natural and human-induced factors. This showed substantial evidence of a human influence on the changes in surface humidity, and also highlighted that natural changes alone were grossly insufficient to explain these changes.

Comparison of specific humidity with the global temperature record provides a strong degree of independent corroboration for recent - 1970s onwards - rapid warming.

Peter Thorne, climate scientist at the Met Office Hadley Centre, said: "This confirmation, that humidity and temperature are both increasing as expected, also has important implications for future human health and comfort - especially our ability to undertake outdoor activities in a warming world."

More about the Met Office Hadley Centre for Climate Change

Notes:

- The Met Office Hadley Centre is the UK's official centre for climate change research. Partly funded by Defra (the Department for Environment, Food and Rural Affairs) and the Ministry of Defence.

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